REMARKS

Claims 1, 2, 6, 7 and 11-21 are now pending in the application. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

Claim 1 as presently before the Examiner refers to a data acquisition, storage and delivery apparatus, comprising a network computing means. The computing means is provided with an acquisition agent with access to usage data from a plurality of different communications resources: a storage agent arranged to store communications usage data from said plurality of communications resources; and a delivery agent arranged to deliver communications usage data to a subscribing management system. The usage data is delivered immediately over a communications link to said subscribing management system when said communication link is available; and said usage data is retained when said communications link fails.

The Examiner has cited US 6,148,337 Estberg and in particular the section from column 12 line 66 to column 14 line 16. This makes reference to a status manager 225, a trap processor 224 and a poller 226 that are responsible for retrieving network information from a public network 130, analyzing the network information to determine to which subscriber the information pertains and supplying subscriber-specific network information to RTR 240. Upon initialization, the status manager 225 first determines what network proxy agents 230 are available. Status manager 225 then invokes a copy of poller 226 and of trap processor 224 for each available network proxy agent. Each poller 226 first gathers network configuration information and network status information from its network proxy agent, which then gathers network information from one or more switches in public network 130. Poller 226 also retrieves subscriber information from RTR 240. Poller 226 uses the subscriber information to analyze retrieved network information and to determine which

network information pertains to which subscriber. Poller 226 then forwards subscriber specific information to RTR 240. Thus, there is no reference to alternative operations taking place when the communication link fails. After Poller 226 completes an initial retrieval of network information, trap processor 224 begins to monitor its network proxy agent for any traps that occur. Trap processor 224 also retrieves subscriber information from RTR 240. If trap processor 224 detects a trap, it uses the retrieved subscriber information to determine which subscribers are affected by the trap and then forwards subscriber specific trap information to RTR 240. In addition, trap processor 224 forwards the trap information directly to those subscribers which are affected by the trap. Trap processor 224 can be configured to confirm the information in received traps which meet a variety of conditions before the trap information is forwarded to the RTR 240 or to subscribers.

The next section goes on to state that in addition to the initial determination of network information that is conducted by Poller 226, Poller 226 also retrieves updated network information on a periodic basis (e.g. once per day). Thus, there is an inferred reference to a store and forward on a once per day basis but no reference to storing only when the communications link fails. The present invention is specifically directed towards delivering usage data immediately to the subscribing management system when the communications link is available.

Estberg goes on to state that alternatively, Poller 226 can be notified by its network proxy agent if a change has occurred in network configuration or Poller 226 can be manually invoked by a user via administrative user interface 222. When Poller 226 is invoked it again gathers current network information, uses the subscriber information to analyze the network information and to determine which network information pertains to which subscriber and forwards either all or new subscriber specific network information to

RTR. Thus, this particular feature refers to all of the information being communicated or a selected portion of the information being communicated. Again, it does not refer to the data being conveyed immediately when the communications link is available or being retained when the communications link fails.

Estberg goes on to state that after RTR 240 has been initialized with subscriber information, general network status information and subscriber specific network information. RTR 240 can receive requests for current network information from subscriber management stations such as subscriber 1 management station 112 and service provider station such as service provider 1 station 160. These requests can be transmitted in a variety of manners. When RTR 240 receives a request for current network information from subscriber 1 management station 112, RTR 240 first verifies the identity of the subscriber, then identifies the service level of the subscriber and finally sends current network information to that subscriber if the request is approved for processing. If the subscriber specific information stored for that subscriber in RTR 240 is not sufficiently accurate (e.g. is not current) RTR retrieves current network information for that subscriber from network proxy agents 230. RTR 240 can also supply real time network status information to subscriber 1 management station 122 if the manager station is capable of receiving unsolicited network status information. Thus again, reference is being made to the transmission of information or not transmitting the information but this decision is based on an assessment as to whether a manager station is capable of receiving unsolicited network status information; it is not concerned with taking alternative action if the communication link fails.

Estberg goes on to state that upon receiving updated subscriber specific network status information for subscriber 1, RTR 240 can automatically forward such information to subscriber 1 manager station 122. Again, a reference to the communication of data this

time taking place automatically without any reference being made to the possibility of a communications link failure. Estberg goes on to state that RTR 240 can similarly process requests from service provider station 160 for current network status information for public network 130 and can similarly supply such real time network status information to the service provider station 160.

Estberg also states that RTR 240 also writes log information regarding the operation of RTR 240 and MLM 150. For example, information on each request received and on each update to RTR 240 can be stored in log files. Alternatively, only unusual situations such as detections of unauthorized information requests may be stored in a log file. Again, reference is being made to information being stored but there is no disclosure of this information being stored or retained when the communication link fails.

Estberg goes on to state that users of service provider station 160 can retrieve the information from the log files via administrative interface 222. Such users can also use administrative user interface 222 to access network status information in RTR 240 or alternatively can view MIB data structures from RTR 240 with an MIB browser. The log manager 221 manages the logs by ensuring that constraints on the data in the logs (for example limits on log size or removal of data that is too old) are enforced.

The applicant therefore respectfully submits that claim 1 in its amended form is not anticipated by Estberg. Claim 1 in its amended form includes the subject matter of previous claim 5. In Paragraph 20 of the previous Office Action, the Examiner states that the section from column 22 line 40 to column 23 line 17 of Shah (US 6,678,835) discloses the feature of the usage data being retained when the communication link fails. A section from line 40 of Shah states that when the primary unit 902 is active and does not detect any defects in

its ports, it continuously listens on the high availability port 906a to keep track of the status of the backup unit 904. When the backup unit 904 is up and running, it connects to the primary unit 902. Once the connection is made, the backup unit 904 begins sending heartbeats to the primary unit 902. The backup unit 904 continuously sends heartbeats to the primary unit 902 in predetermined intervals. The backup unit 904 sends a keep alive packet including a keep alive command to the primary unit 902 every second.

The primary unit 902 responds to the keep alive packet by changing the command field of the packet to the keep alive response command and retransmitting the packet to the sender. If the backup unit 904 does not receive a response back from the primary unit 902 for a predetermined period, **the backup unit begins preparing to take over the active role.** Preferably, the predetermined period should not be greater than two consecutive keep alive packets.

Upon taking the role of the active unit, the backup unit 904 attempts to re-establish a connection with the primary unit 902 at regular intervals to determine whether the problem in the primary unit has been cured. If the problem or failure has been cured, the backup unit 904 relinquishes its control of the primary unit 902 after setting the IP address of the network interface cards to the assigned value.

In situations where the backup unit 904 takes over the active role from the primary unit 902, an alert alarm is sent to the network administrator indicating such a change. In addition, if the primary unit 902 does not receive heartbeats from the backup unit 904, an alert is sent to the administrator **indicating that the backup unit has failed.**

A situation may arise when both the primary unit 902 and the backup unit 904 are fully functional and the backup unit 904 desires to take over the active role. In this case, the backup unit 904 transmits a shutdown command to the primary unit 902 which then relinquishes control. The backup unit 904 continues its role as the active unit until the primary unit 902 transmits a request to the backup unit 904 to relinquish its active role.

Firstly, it should be noted that this section of Shah does not in any way refer to a communications link at all. It may be describing something similar to a delivery agent that is responsible for the delivery of data. It is then directed towards a situation in which the delivery agent fails. Upon detecting a failure of this type, a backup delivery agent is provided. Thus, one could imagine a situation in which a similar backup was provided for the communications link. Thus when extending this to the present invention the communications link would be provided with a backup such that the usage data is supplied over the backup when the primary communication link fails. The present invention does not resolve the problem in this way. As claimed and as previously stated, the usage data is delivered immediately over a communications link to the subscribing management system when the communications link is available. However, if the communications link fails, the usage data is retained. This solution provides an environment in which it is not necessary to provide a backup given that the information may be transmitted when the communications link is re-established.

The applicant therefore respectfully submits that claim 1 in its previously amended form cannot be rendered unpatentable based on the combination of Estberg with Shah.

It is acknowledged that Miloslavsky teaches the resources being PBX telephone systems and that Cravo teaches the monitoring of mobile telephony networks. Again, it is

respectfully submitted that the combination of the teachings of **all four** prior art references do not show the integers of the invention as claimed by amended claim 1 and therefore the invention as claimed is considered by the applicants to be patentable over the prior art of record.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Dated: January 11, 2008

Respectfully submitted,

By

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